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USSR Report

HUMAN RESOURCES

(FOUO 6/80)

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LABOR

WAYS TO INCREASE MANPOWER UTILIZATION DESCRIBED

Moscow VOPROSY EKONOMIKI in Russian No 5, May 80 pp 51-62

[Article by T. Baranenkova: "Reserves for Saving Manpower"]

[Text] Both the intensive and extensive forms of manpower utilization are inherent to the present stage of industrial development. The intensive form is characterized by increased efficiency in the functioning of live labor on the basis of introducing new technology and carrying out the corresponding organizational measures. As a result of this there is a decline in labor expenditures for the production of a unit of product. In the given instance the growth of labor productivity provides a hypothetical and real freeing of manpower. The first indicator characterizes the number of workers which would be required in industry for ensuring the increased production volume with fixed labor productivity.[1] The real freeing of the labor force which is also a consequence of the rise in labor productivity is linked to the elimination or substantial transformation of jobs brought about by a structural reorganization of industry, by the reconstruction of enterprises, by the modernization of equipment, and so forth.

The manifesting of the extensive form of manpower utilization, as a rule, is related to an increase in the total amount of live labor in industry due to an increase in the shift factor, more overtime, as well as due to a new influx of workers into industry, or the greater number of persons employed in it. This is dictated by the necessity of creating new sectors and types of industrial production, increasing the demand for employees in new professions, and so forth. However, as has been correctly pointed out in the economic literature,[2] under the conditions of introducing new equipment, improving production methods, and raising the cultural and technical level of the workers, a quantitative growth of manpower presupposes not only the extensive but also the intensive use of it.

During the Ninth Five-Year Plan, in contrast to the previous ones, the number of employees in industry rose by almost 2.5 million persons. In 1971-1975, there was not only an absolute but also a relative decline in the increase of the number of personnel. Some one-fifth of the total increase in employees went into industry, instead of the approximate one-third which

has been characteristic for the preceding period. This led to a decline in the number of persons employed in industry.[3]

Regardless of the sharp decline in the increase in the number of workers, the overall growth of industrial product in 1971-1975 remained as before due to the climb in labor productivity which was responsible for 84 percent of the increase in product.

In the Ninth Five-Year Plan the scale of the real release of manpower (as a result of the more efficient use of live labor and the intensive use of the employees) was significant in a number of industrial sectors. As a result, at a portion of the enterprises new capacity, production and shops were put into operation without an increase in the number of personnel, that is, to a significant degree the demand for manpower was satisfied by a redistribution of it. Thus, at the enterprises of the USSR Ministry of Ferrous Metallurgy, in 1971-1975, the freeing of employees related to the growth of labor productivity was over 350,000 persons, of which 270,000 were shifted to other production areas, including 180,000 persons to staffing new projects. In the chemical industry, 56,100 persons were freed alone at the enterprises employing the Shchekino method.

The experience of the leading enterprises indicates that a substantial rise in the effectiveness of labor expenditures and a reduction in the number of personnel, including servicing, can be achieved by carrying out technical and organizational measures. Thus, at the plants of the Ministry of Chemical Machine Building, due to the introduction of sectorial maintenance standards, in 1971-1975, around 10,000 auxiliary workers were released and transferred to basic jobs.

The release of a certain portion of the employees in a production process in the course of introducing the achievements of scientific and technical progress and their use at new jobs (often in a new capacity) serve as an essential condition for achieving a quantitative and qualitative proportionality between the elements of the productive forces. These also contribute to an improvement in the utilization of personnel and create an additional, internal source for providing industry with personnel.

Thus, the traditional source of increasing the number of workers, that is, aa rise in the labor resources, at the present stage has lost its previous importance, and the role of regrouping the labor force already employed in social production, as a result of freeing it on the basis of a rise in labor productivity, has been continuously growing.

In 1976-1980, the basic directions for the development of the USSR national economy provide that 90 percent of the increase in industrial product is to come from a rise in labor productivity. However, in 1976-1978, only about three-quarters of the increase in industrial product was obtained as a result of the rise in labor productivity. One out of every six industrial enterprises did not fulfill the quota for the growth of labor productivity, and over 1 million workers did not meet the established standards. The

plans were not fulfilled for introducing new equipment, and this told negatively on the rates of technical reequipping and the mechanizing of auxiliary production. As a result of the losses of working time due to absences, counted entire-day and internal shift stoppages and absences with the permission of the administration, an average of 170,000 workers was not employed every day in industry. All of this shows the insufficient effective use of live labor.

The pace of freeing the industrial and production personnel as a result of a rise in labor productivity is determined by an interacting system of various factors including technical, organizational and socioeconomic. Among these the basic place is held by the introduction of the achievements of scientific and technical progress which at the same time determines the changes in the organization of social production and labor.

Regardless of the successes achieved in the area of raising the technical level of production, in industry there still are great reserves for a rise in labor productivity and the release of manpower. These are first of all the replacing of manual labor by machine labor. According to 1975 data, in industry more than 50 percent of the workers were employed in manual labor, including over one-third in heavy physical labor.

The basic portion of manual labor occurs in machine building and metalworking, the light, food and coal industries, forestry, and the building materials industry. In auxiliary production there is also a large number of workers employed in manual labor. In 1975, the proportional amount of workers employed in mechanized labor in Soviet industry in basic production was 62.4 percent, and just 27.6 percent in auxiliary jobs. The disproportions in the development of the basic and auxiliary sections of production still survive with 20 percent of the equipment available to the enterprises going into the mechanization of auxiliary production, and 80 percent for the technical reequipping of basic production. At the same time, according to the calculations of the Department for the Problems of Raising Labor Productivity at the Economic Scientific Research Institute of the Ukrainian Gosplan, the economic effectiveness of measures to mechanize labor in auxiliary production is 2.8-3.5-fold higher than in basic production. Thus, with expenditures of 1 million rubles on introducing new equipment in machining (including advanced technology), it is possible to free 137 persons, and with the same expenditures in foundry work, 170 persons. If this amount were channeled into mechanizing transport and materials handling jobs (including interprocess transport), it would be possible to free 476 persons.

A rise in the rate of freeing workers such as loaders, sling operators, storekeepers, carriers, inspectors and other of the most widely found vocations of manual labor, is presently impeded both by the shortage of modern mechanization and automation, particularly for assembly, materials handling and warehousing jobs, as well as by shortcomings in the system of material and moral incentives, planning and organizing the process of replacing live labor by embodied.

Of great importance for activating the process of releasing manpower, including workers engaged in manual labor, is above all a further improvement in the planning of this process, the primary accounting and reporting. The standard procedure for working out the five-year plan of a production association (enterprise) in 1976-1980 recommends that for each year of the five-year plan, a plan be set for the absolute and relative reduction in the number of workers engaged in manual labor. However, up to now such plans have not been worked out at a majority of the enterprises.

The Decree of the CPSU Central Committee and USSR Council of Ministers "On Improving Planning and Strengthening the Effect of the Economic Mechanism on Raising Production Efficiency and Work Quality" has outlined a system of indicators which are to be set for the ministries, associations and enterprises in the five-year plan (with a breakdown for the years). These indicators include, in particular, a limit on the number of employees and a quota for reducing the use of manual labor. As an obligatory quota, it is advisable to limit oneself to determining the scale or the release of workers engaged in heavy physical and unskilled labor, on the basis of raising the level of mechanization and automation, including the scale for releasing workers employed in loading, transport and warehouse jobs. The absence of quotas for the release of manpower in the national economic plans has led to reduced attention to this problem on the part of the economic bodies.

Planning for the 5 years for the release of a certain contingent of workers (with an annual breakdown) can be viewed as the minimal program. The enterprises, in turn, could set counterplans for releasing employees, in more fully mobilizing the internal production manpower reserves. This would make it possible to promptly adjust the balance calculations for the additional need for manpower and the sources of covering it, as worked out broken down for the enterprises (associations), sectors and territories.

It must be pointed out that the annual planning of quotas for the real release of workers engaged in manual labor and effective control over the course of fulfilling these require the statistical bodies each year to account for the number of workers engaged in mechanized, manual and heavy labor (at present the control is run once every 3 years).

The experience acquired in Latvia, in Chelyabinskaya, Kuybyshevskaya and Zaporozhskaya oblasts in releasing workers engaged in manual, heavy and unskilled labor has shown that an important condition for successfully regulating the process of releasing personnel is also an improvement in the present-day methods of planning and evaluating the level of labor mechanization, and the eliminating of difficulties in determining the heaviness of manual labor. Here of great importance is the elaboration by the USSR Gosplan together with the USSR Goskomtrud [State Committee for Labor and Wages], the AUCCTU and other involved organizations, of a list of jobs which should be mechanized and automated first on the scale of the national economy, the sector and the region, and the drawing up of long-range and current plans to reduce (and subsequently fully eliminate) heavy manual labor.

The better use of the labor force and the eliminating of its scarcity increase the need for a further improvement in the reproduction structure of capital investments and a rise in the proportional amount of resources being channeled into the technical reequipping and reconstruction of operating enterprises where production will grow with the same or smaller number of employees. Of important significance in this regard is the changeover to the planning of new construction and existing production as a single whole and the allocating first of the resources needed for the technical reequipping and reconstruction of existing enterprises.

The necessity of increasing production by reconstruction and technical reequipping is particularly great in the old industrial centers of the nation, in the labor-intensive sectors and above all in the auxiliary areas of production. Of great importance for disclosing the internal production manpower reserves and for mobilizing them is a comparative analysis, both internal plant (in the course of which, for example, the technical level of shops is compared) and interplant (when similar shops of different enterprises are compared). This makes it possible to more correctly determine the production areas which should be technically reequipped first. An interplant analysis often shows significant internal production manpower reserves (see the Table), the mobilization of which in a majority of instances does not require substantial capital expenditures, since the reserves are basically caused by shortcomings in labor planning. In this regard it is important to work out the methods of interplant analysis and these, although containing much in common with internal plant, have a number of particular features: for example, the choice of the criteria for comparative effectiveness, the necessity of ensuring comparability of the indicators, and so forth.

An important role is also played by a further improvement in the design practices for the reconstruction of enterprises. The reconstruction designs often lack such indicators as the number of employees and labor productivity. Close attention must be paid to the proposals voiced in economic literature that a comparison must be established by legislation for the technical and economic indicators of renovation plans with analogous indicators for the leading domestic and foreign enterprises considering the prospect of their development.[4]

Of great importance is a stronger material incentive for the collectives of the existing enterprises to replace fixed productive capital and to carry out work in reconstruction and technical reequipping.

The decree on improving the economic mechanism outlines benefits for the client enterprises and contractors for carrying out work related to the technical reequipping and reconstruction of existing production (paying bonuses to workers for carrying out the given jobs, the possibility of increasing in individual instances the wage group for leading workers in construction-installation organizations, and so forth).

Actual load factor for auxiliary workers in machine shops of plants of petrochemical machine building

Name of subsectors of ministry of chemical machine building	Minimum load		Maximum load	
	a	b	a	b
Mechanic for interrepair maintenance of equipment				
Compressor machine building	Kazan' Compressor Plant, machine shop No 1	300	Urals Compressor Plant, machine shop No 2	822
Petrochemical machine building	Volgograd Plant for Petroleum Machine Building imeni Petrov, machine shop No 3	490	Snezhnyanskiy Plant for Chemical Machine Building, machine shop No 2	935
Electrician for interrepair maintenance of equipment				
Paper making machine building	Kaliningrad Experimental Plant for Paper Making Equipment, machine shop	644	Verkhnedneprovsk Plant for Paper Making Equipment, machine shop	1,435
Polymer machine building	Tambovpolimermash [Tambov Polymer Machinery], machine shop No 15	426	Kiev Bol'shevik Plant, machine shop No 32	2,520
Fittings manufacturing	Krolevets Fittings Plant, machine shop No 6	555	Aleksin Plant for Heavy Industrial Fittings, machine shop No 5	1,795

Key: a--Name of plants and shops
b--Number of units of repair complexity

An important element in improving the economic mechanism is an improving in the entire economic incentive system aimed at saving live labor, and particularly at releasing manpower to outside the given enterprise for subsequent employment in other production areas, and in other sectors of the national economy. For increasing the economic incentive of the production collectives to achieve greater results with a smaller number of workers, the eliminating of the shortcomings in the incentive system is of crucial significance, as these encourage the enterprises to conceal internal production manpower reserves. It is also essential to strengthen the economic sanctions placed on enterprises which permit the inefficient use of live labor and have an above-planned number of employees.

The desire of the enterprises to overstate the number of employees, in having become particularly apparent in recent years,[5] is related primarily to the fact that this indicator determines the amount of the wage fund, the material incentive fund, the fund for sociocultural measures and housing construction, the fund for bonuses for the creation and introduction of new equipment, the total bonus due for incentives under the socialist competition, and the salaries for managers, engineers and technicians (the latter involves only the enterprises of the machine building and metalworking industry).

With a reduction in the product volume plans, the wage funds initially set for the enterprises are not always correspondingly adjusted, and with a fixed volume of produced product they are sometimes unjustifiably increased. Such discrepancies in the plan indicators have weakened the attention paid to disclosing internal production manpower reserves, and have created for the enterprises definite opportunitites for maintaining a number of employees which exceeds the planned demand, and for further increasing this number.

The Decree of the CPSU Central Committee and the USSR Council of Ministers "On Improving Planning and Strengthening the Effect of the Economic Mechanism on Raising Production Efficiency and Work Quality" pays serious attention to achieving stability in the annual and quarterly plans set for the enterprises. Provision has been made to institute disciplinary and material liability procedures against leaders of ministries, departments and other bodies which allow unjustified changes in the plans or an adjustment of them downwards to fit actual fulfillment. The decree outlines measures to further develop cost accounting at the enterprises and intensify economic production incentives. Above all greater significance is given to the normative planning method. The five-year plans will contain stable economic standards differentiated for the years (including the wage fund per ruble of product, profit deductions into the economic incentive funds) guaranteeing an increase in the resources to be left available to the enterprises, depending upon the end results of economic activities.

A change in the planning procedures for the wage fund, and the direct linking of its amounts with the amount of produced product and not with the number of workers create favorable conditions for the effective use of

manpower and its release. This has also been aided by extending the rights of the enterprises to spend the saved money of the wage fund obtained in comparison with the set standard. For an additional incentive for the growth of labor productivity and for fulfilling the planned volume of work with a smaller number of employees, using the given savings, it is possible to employ higher additions than before to the wage rates and salaries of workers, engineers, technicians and white collar personnel for combining jobs, for broadening the work areas, for high professional expertise, as well as bonuses for initiative in introducing technically sound standards, their prompt revision, and so forth.

The deduction of money into the material incentive fund will be carried out at rates set in percent of profits, and only in individual sectors in relation to the wage fund of the base year of the five-year plan. The unused balances of the money in the economic incentive funds are to be carried over to the following year and not confiscated.

Of important significance is the introduction of the indicator of normed net product which is to be used in a majority of sectors as the basic one in production planning, and in determining the level of labor productivity and the planned wage fund.

The further development of cost accounting and the strengthening of the role of economic levers and incentives based upon long-term stable standards, the revising of the method of evaluating enterprise operations, and a rise in the enterprises' incentive to improve financial and economic results, in particular by saving live labor and releasing workers, are particularly important in the existing demographic situation which in the 11th and 12th five-year plans will be characterized by a decline in the increase of the working-age population.

The spread of the Shchekino method plays a major role in carrying out an increasing amount of work with a smaller number of employees. Over the 11 years of operating under new conditions, the Shchekino Azot [Nitrogen] Association has been able to increase product output by almost 3-fold, labor productivity has gone up approximately 4-fold, and here the number of workers has declined by 1,570 persons. The creative development of the Shchekino method at the Novopolotsk Polimir Association, where brigade servicing of equipment was employed for the first time, made it possible to reduce the number of personnel by 492 persons and raise labor productivity by more than 30 percent. Due to the introduction of the Shchekino method in the chemical industry alone, over the period of operating under the Shchekino method, over 60,000 persons have been released, and approximately 37,000 at the enterprises of the oil refining and petrochemical industry. While as a whole for industry in the 10th Five-Year Plan 84 percent of the increase in product output was obtained from a rise in labor productivity, at the 326 enterprises employing the Shchekino method and surveyed by the USSR TsSU [Central Statistical Administration], it was 92 percent.

A rise in the efficient use of employees and a saving of live labor in introducing the Shchekino method are achieved as a result of strengthening the principles of collectivism in work, activating the rationalizer movement, increasing worker skills, strengthening labor and production discipline, reducing personnel turnover, improving the organization of labor and production, and employing more advanced equipment and production methods.

The results of the Shchekino experiment have affirmed the close tie between the economic interests of the enterprises and individual employees and manpower utilization, and they have shown the possibility of the centralized regulation of the process of freeing the labor force considering the social need for personnel. The Shchekino experiment has established the bases for a new approach to planning the wage funds, and to broadening the rights of the enterprises in organizing the material incentives for the workers. Accounting and reporting have been organized correspondingly. In the 1977 annual report, for the first time the section was introduced "Basic Operating Indicators of the Enterprise (Organization) for Accelerating the Growth of Labor Productivity and Increasing Product Output with a Smaller Number of Personnel." This reflected the indicators of the actual release of industrial-production personnel, including workers (previously the reports had only the indicators characterizing the conditional release of employees related to the introduction of new technology and the carrying out of NOT [scientific organization of labor] measures).

The basic elements of the Shchekino experiment have become a component part in the new wage conditions introduced in 1973. The enterprise leaders have been permitted to employ (from the savings in the wage fund obtained by freeing employees) various surpayments for combining jobs, broadening the equipment servicing areas, and so forth. These were tested out for the first time at the Shchekino Chemical Combine. Although very many enterprises had the given right, it did not have a substantial influence on the release of personnel as the enterprise leaders, having received the right to encourage operations with a smaller number of personnel, basically carried out organizational and technical measures and only at individual production areas, often without proper preparations.

Regardless of the fact that the use of the Shchekino method is economically effective not only for the enterprises but also for society as a whole, as it makes it possible to accelerate the growth of labor productivity, to reduce expenditures on wages in production outlays, to more rationally utilize labor resources, and to create a definite reserve of them for manning new construction projects, to raise the skill level of the personnel, and so forth, it has spread slowly. In 1978, only around 1,200 plants and factories operated under this method.

The reasons for such a situation, in our view, are numerous. First of all they are caused by the contradictions between the new methods of organizing and planning plant production and the old, customary way of sectorial planning based, in particular, on the principle of "from the achieved level."

One cannot help but note also the imperfections in the instructions for introducing the Shchekino method, and these over the 10-year period have undergone eight amendments, and not each of them, as practice has shown, has been of a positive character. There have been numerous instances of violating the established rules of the experiment. Thus, even its basic foundations such as a stable production plan for the 5 years with a dividing of the quotas by years, the fixed wage fund (subsequently this principle was adjusted somewhat in line with the introduction of new shops, units and assembles at the enterprises, and other circumstances) and the right to establish surpayments from the savings of the wage fund, in practice were often not observed. In the procedure of "adjusting" the plan indicators, often the entire wage savings was taken away from the enterprises.

The last variation of the conditions for employing the Shchekino method for improving the organization of labor, material incentives and planning as approved in April 1978 has maintained a number of provisions of the 1977 regulation (on simplifying the paperwork for converting to the Shchekino method, on raising the role of the ministries in the planned introduction of the given method), and has restored a number of provisions eliminated by the 1970 and 1977 conditions such as the possibility of transferring to the material incentive fund the entire unused savings of the wage fund, to establish surpayments for workers engaged in jobs involving equipment repairs, and in individual instances to pay bonuses to the piece and time workers within the limits of up to 60 percent of the piece rate or wage rate, to encourage a reduction in the number of personnel at operating enterprises not only in comparison with the sectorial and intersectorial standards, but also in comparison with the actual number in the instance if the rates for the labor expenditures have not yet been set. New types of material incentives are also to be introduced, and provision has been made for increasing the amounts of the previously set ones.

In our view, the new conditions will contribute to a further extension of the Shchekino method. At the same time, the granting of greater rights to the enterprises in disposing of the wage fund, in controlling the staff schedule, and in dismissing surplus workers would encourage the development of initiative among the production collectives to increase the output of product with a smaller number of personnel. Due to the fact that at the enterprises employing the Shchekino method a significant portion of the savings in the wage fund remains unspent, in the economic literature proposals have been raised on various ways for using this, and in particular, for creating on the basis of the given savings a special fund for establishing surpayments for continuous length of employment.[6] In our view, it is impossible to agree with such a proposal as the savings of the wage fund should have a specific purpose, that is, compensate for the increased labor expenditures and the growth of its quality related to carrying out a larger volume of work with a smaller number of workers.

In the incentive system it is important to consider not only the interests of the employees who improve their professional and skill level and the amount of work performed, but also the interests of the workers who are

released, and above all those who must adapt to another collective, and sometimes change profession and residence. Here of important significance is the preliminary elaboration of measures and the implementing of specific means in accord with the interests of society and the individual. As yet a system of effective incentives has not been created on this level, and this impedes the spread of the given method and holds up the actual release of personnel.

It is essential to implement the long supported proposals to work out legal enactments which release the enterprises from the job placement of released employees and provide the latter with preferential conditions for retraining and reassignment (an increase in the amount of leave aid, preferences in obtaining work through the job placement bodies, the maintaining of registration at the former place of residence in moving to another locality, the establishing of reduced output norms for the period of mastering a new profession, and so forth).[7]

The achieving of high rates of saving manpower, including the release of it, is also attained on the basis of employing other progressive forms for the organization of labor and material incentives, in particular the brigade contract as the basic form for the development of earnings according to end results.

The above-mentioned decree emphasizes the need for the broad development of the brigade form of organizing and encouraging labor, and in the 11th Five-Year Plan this should become the basic one. For these purposes the rights of the brigade collectives will be substantially broadened in the area of the organization of labor and its material and moral incentives.

In industry, predominantly in machine building, the brigade contract method began to be introduced in 1973. The essence of the given method is in extending the principles of cost accounting to the activities of the brigades which assume an obligation (contract) to carry out a certain amount of work of a stipulated quality at the designated time. At the same time provision is made for the amount of expenditures on the production of the product, and the forms and methods of encouraging the employees to fulfill the assumed obligations. Every month each brigade is given a production plan in volume and product range, a wage fund, average wages, the number of workers, the growth of labor productivity, and a plan for the expenditure of basic materials and tools.

The brigade is organized by a decision of a worker meeting.[8] The size and skill composition of the brigades are set proceeding from the content and nature of the production process, the volume and complexity of the jobs, the employed technical and organizational means, the material and technical supply of the jobs, the requirements of the organization of labor, and other factors.

The brigades can be specialized or integrated; the latter bring together workers of different professions for carrying out a range of jobs which are

technologically different but interrelated and encompass the full cycle of product production or a certain completed portion (an article, a set of parts, and so forth).[9] The integrated brigades have proven effective when they include not only production workers but also auxiliary workers (repairmen of production equipment, sling workers, crane operators, and so forth).[10]

In making up the brigades, in addition to production necessity, consideration is given to the desire of the people to work collectively and their psychological compatibility. Ordinarily initially as an experiment in a number of shops specialized brigades are set up and definite cooperation is provided between them in production. The formation of the integrated brigades basically with a complete production process is a higher degree of the collective organization of labor.

The brigade form of the organization and encouragement of labor not only broadens the range of jobs performed collectively, but also helps to achieve a fundamentally new, higher level of production management involved primarily with a change in the executive and management functions within the brigade and the broadening of internal collective democracy. The brigade (cost accounting) system is a system for the collective solution to questions both production and social, and it is aimed at deepening the collective principles inherent to socialism in labor activities. All the most important questions of the brigade such as the admission of new workers to the collective, the distribution of collective earnings, the determining of the measures of social and material action against the violators of labor discipline, the questions of improving production methods and supplying the workers with stock, tools, and so forth, are taken up at its meetings.

The advantages of the brigade form are manifested also in the greater role of the primary labor collective in indoctrinating a communist attitude toward labor. In particular, guidance for new workers assumes qualitatively new forms as virtually the entire brigade acts as a collective guide for a worker admitted to the brigade. With the brigade organization of labor, the effectiveness of the socialist competition is increased, since the issuing of monthly and annual plans (in terms of volume and range) to each brigade makes it possible to concretize the accepted socialist obligations and establish strict control over their fulfillment.

The brigade form of work with payment for the final result provides a more organic linking of personal and collective interests and a more effective realization of personal interest through the collective. This, on the one hand, strengthens the dependence of each brigade member upon the overall work results, and on the other, confronts the brigade collective with the need to create conditions for highly productive labor of each brigade worker. A rise in the collective interest and responsibility of the brigades for fulfilling the plan quotas and obligations to associated workers helps to create rhythmical operations, a more correct placement of the personnel and a rational equipment load factor, and to increase the shift coefficient, as a result of which labor productivity rises.

The Decree "On Further Strengthening Labor Discipline and Reducing Personnel Turnover in the National Economy" approved by the CPSU Central Committee, the USSR Council of Ministers and the AUCCTU notes the important significance of progressive forms for the organization of labor and wages in strengthening labor discipline and raising labor productivity. The ministries and departments, the leaders of the associations and enterprises, the party and trade union organizations have been instructed to implement measures for a consistent conversion to collective forms of the organization of labor and wages. They are to systematically provide the necessary aid to the brigades in improving their work in the recruitment and placement of personnel. They are to raise the role of the councils of the production brigades and the councils of brigade leaders. They are to improve the material and technical equipping and raise the power-to-labor ratio, and improve the organization of wages and rate setting. They are to more widely involve the labor collectives and social organizations in solving these questions.

In our view, the connection of the process of freeing the labor force with the brigade form of the organization of labor and wages is expressed primarily in a reduction in the number of workers in the brigade with an increasing or fixed amount of work. Thus, a selective analysis of the production activities of ten brigades working under the conditions of a brigade contract, as carried out by us at the Gomsel'mash [Gomel' Agricultural Machinery] Production Association showed that in the first quarter of 1979, in comparison with the analogous period of 1978, the number of personnel in these brigades declined by an average of 9.1 percent, and the output per worker rose by 13.2 percent, while the amount of the maximum and minimum wage rose, respectively, by 1.7 and 8.3 percent. In individual brigades, with a stable production volume, the release of manpower over the year was 10-13 percent.

The influence of the brigade form in the organization and encouragement of labor on the intensification of the release of manpower is also indirectly manifested, that is, due to the simplification of norm setting, facilitating the setting of production quotas and accounting, and to reducing the payment and planning documents in the brigades and the partial or complete elimination of product quality control. All of this creates the prerequisites for reducing the staff of rate setters, inspectors and production chiefs.

The brigade form of the organization of labor and wages is still spreading slowly. For example, in the industry of Minskaya and Vitebskaya oblasts, a survey of over 200 industrial enterprises has shown that in 1975 only 28 percent of the workers had joined brigades, and 33 percent in 1977, while there were no brigades at all at one-fifth of the enterprises.[11]

The further forming of the new type of brigades, as caused not so much by the requirements of technology as by considerations of an economic, organizational and social nature, requires the very rapid solution to a number of questions, including the most important one of the distribution of earnings in the brigades.

At present in the brigades working on one common contract, three types of wage distribution are used: Equally between all the workers (this is usually practiced in small brigades, where the difference in skills and experience is slight); in accord with a firmly established category; in terms of the coefficient of labor participation or a hypothetical category.[12] The last method is the predominant one.

The distribution of the brigade earnings or a portion of it (as part of the piece earnings and bonuses) using the coefficient of labor participation more accurately considers the labor contribution of each to the overall amount of work done by the brigade, and this is its positive aspect. In working on a common contract, it is also essential to consider individual output which makes it possible to better reconcile personal interests with the interests of the collective, to organize the competition, and to more fully disclose the organizational reserves for raising labor efficiency. At the same time, the introduction of accounting for individual output requires consideration to the nature of the job done (including its "advantage" or "disadvantage") and the corresponding adjustment of the labor participation coefficient for the purposes of strictly observing the socialist principle of wages in accord with the quantity and quality of labor.

It is becoming essential to work out sectorial provisions which would contain recommendations on the quantitative membership of brigades, the principles of making up the brigades, considering the sectorial and other particular features. It is essential to clarify the questions of the role and functions of the brigade leader and his relationships with the foreman. At present it is important to organize a broad network of courses and schools for the leaders of the brigades, sections and shops, and to improve the system of information on the size of the brigades and the indicators of their production and social activities.

FOOTNOTES

1. Thus, the growth of labor productivity in 1971-1978 provided a savings of the labor of 14 million persons in industry.

2. See, for example, N. S. Kistanova, "Regional'noye Ispol'zovaniye Trudovykh Resursov" [Regional Use of Labor Resources], Izdatel'stvo Nauka, 1978, p 15.

3. In the first 3 years of the 10th Five-Year Plan, the tendency for an absolute and relative decline in the increase in the number of persons in industry (in relation to the increase of employed persons in the national economy) has been maintained.

4. See, for example, A. S. Pavlov, "Sotsial'no-Ekonomicheskaya Effektivnost' Tekhnicheskogo Perevooruzheniya Predpriyatiy" [Socioeconomic Effectiveness of the Technical Reequipping of Enterprises], Izdaniye LGU, 1973, p 92.

5. In 1976, the number of employees determined from the total of the enterprise plans exceeded the actual number by 1.9 million persons, and in 1977 and 1978, by more than 2 million persons. An analogous comparison of indicators for labor productivity in USSR industry, for example, in 1978, shows an understating of this indicator by approximately 1.5-fold (3.8 and 2.5 percent).

6. See VOPROSY EKONOMIKI, No 10, 1977, p 111.

7. See, for example, VOPROSY EKONOMIKI, No 6, 1965; No 10, 1969.

8. A changeover to the brigade form of the organization of labor is carried out according to the request of the shop chief or the shop trade union committee by an order of the director with the agreement of the plant trade union committee. The brigade leader is appointed by an order of the shop chief upon suggestion of the foreman. The brigade council the functions of which include a reviewing of questions related to improving the organization of labor, the allocating of wages, the development of the socialist competition, and so forth, is elected by open voting from among the leading workers.

9. For the purposes of reducing intershift losses of working time and the more efficient use of equipment, specialized or integrated brigades of the complete type are set up, that is, brigades which bring together workers employed on two or more shifts and working under a common contract.

10. The collective earnings of these brigades consists of the piece earnings (determined by the product of the piece rate of a machine set by the total number delivered to the other shops or the warehouse) and the wage rate of the time workers.

11. See SOTSIALISTICHESKIY TRUD, No 8, 1979, p 93.

12. The labor participation coefficient can be increased (in definite, preset amounts): for initiative in the development and use of advanced labor methods, for the systematic performing of jobs in a related profession; for labor activeness aimed at the maximum use of equipment and the most rapid introduction of new technology, and so forth. Conversely, the given coefficient can be reduced for the violating of labor discipline and for failures in work. The amount of it is set monthly by the brigade council for each worker.

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EDUCATION

CERTAIN PROBLEMS IN FURTHER DEVELOPMENT OF SECONDARY EDUCATION

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/Article by L. F. Kolesnikov and V. N. Turchenko: "Certain Problems in the Further Development of Secondary Education"/

/Text/ Under present-day conditions in determining the future prospects for the development of education, we should obviously proceed from a recognition of the feasibility of the outstripping development of the field of education in relation to all the other fields of the national economy. This means that the growth rate of investments in this sphere ought to be higher than the growth rate of capital investments in the sectors of material production. The need for precisely such an approach is justified today by many major economists and is confirmed by worldwide experience.

The society's outlays being planned for the development of education must be correlated not only with the expected pedagogical result but also with the proposed increase in their economic yield. Here it is necessary to precisely delineate the direct future efficiency which will be manifested in the future by means of the increase in the skills and vocational competence of workers who have raised the level of their general and specialized education, the direct efficiency which the educational system can yield in the process of its functioning by means of combining instruction with productive labor and research work of the pupils and the indirect efficiency which is manifested in the fact that improving the conditions of the education and instruction of the rising generations facilitates the retention of their parents in enterprises, a more complete utilization of labor resources, and so forth.

The implementation of secondary education in our country and especially its further improvement require large financial and material-technical outlays. Under present-day conditions, however, secondary education is an important factor facilitating an increase in labor productivity. Thus, according to data from specialized investigations, the output indicators of workers who have a complete secondary education exceeded the output norms of workers who have an eight-year education by a total of 25 percent. Increasing the skills of a worker with a 10-year education by one category requires one-fifth the time than for a worker who has an education of five or six grades.

Similar ratios have been traced as well between labor results and the level of success in school (by means of the average marks on diplomas). We can also assume that a substantial increase in outlays for the further improvement of secondary general education would prove to be extremely effective not only from a social but also from an economic point of view. Unfortunately, up to now the methods necessary for calculating this have not existed even on the most approximate level. Moreover, the interrelationship between the level of education and the production indicators is far from unitary in its values, and it is complex and contradictory in nature. On this basis and on that of certain specific research studies a conclusion was drawn concerning the existence of a law of correspondence between the level of a worker's education and the nature of the work being performed, according to which the creation of a "reserve supply of education" which exceeds the production requirements is, so to speak, an unnecessary extravagance from an economic point of view (See Solov'ev, A. V., "The Influence of Workers' General-Educational Level on Labor Productivity," in the collection: "Sotsial'no-ekonomicheskie problemy rabochei sily pri sotsializme" /Socio-economic Problems of Manpower under Socialism/, Leningrad, 1972, pp 370-371).

It seems that such an interpretation of the facts is not completely adequate and requires to be made substantially more precise: here it must be a question of whether the specific content of today's secondary general education often turns out to be not in accordance with the actual requirements of production. Education which is not connected with a systematic inclusion of the pupils in production work frequently forms a negative attitude towards physical labor. Certain sociologists suppose that the intensified, vocationally oriented work has already led, so to speak, to a situation whereby a turning-point has occurred in the life plans of young people: if in the mid-1960's the overwhelming majority of schoolchildren (75--90 percent and more) were oriented toward the VUZ (higher educational institution), then already by 1975 there had occurred an essential reorientation to the working occupations, and thereby a large concordance was ensured between the plans of the secondary-school graduates and society's economic requirements. Is this really the case? If we consider the relative indicators--the proportion of the total mass of graduates--, then such a conclusion does indeed suggest itself. In 1965 the day complete secondary school in the country was graduated by only about 20 percent of the young people of the appropriate age (913,000 persons), whereas in 1975 the proportion was already more than half (2,716 persons). Consequently, even if we consider that the proportion of school graduates oriented toward the VUZ was reduced from 90 to 50 percent, in this case as well the absolute number of young people desiring to study in VUZ's after graduating from secondary school did not decrease but, on the contrary, has grown by more than 60 percent (See "Narodnoe khozyaystvo" /National Economy/, Moscow, 1975, p 670). For Novosibirskaya Oblast, for example, in 1965 75 percent of the 10th-grade graduates who were oriented towards the VUZ amounted to slightly more than 6,000, while in 1975 the corresponding figures were 57 percent and more than 14,000 graduates. The total number of graduates oriented towards professions involving mental work amounted approximately

to 7,400 persons, while in 1976 this figure was about 20,000. Prior to 1965 the VUZ's of the city of Novosibirsk were able to accept more students for beginning courses than the secondary schools were graduating. But now the acceptance into VUZ's is less by a factor of 1.8 than the number graduating from the oblast's schools. In 1965 the principal mass of those desiring to study at VUZ's (75 percent) realized this desire, but in 1975 less than 50 percent of those desiring to enroll at VUZ's did so. Thus, the degree of concurrence of desires to study in a VUZ and the actual requirements of society for students and specialists was much greater here in 1965 than it was in 1975. Similar conclusions may be drawn from an analysis of the results of research studies conducted in other regions of the country.

If we consider that during the 1960's those who did not intend to enroll at higher or secondary specialized educational institutions (i. e., the greater part of the population from 14 to 17 years of age) were oriented principally to the working occupations and to physical labor in agriculture and that in the national economy the "demand" for such occupations now remains much greater than for occupations involving mental work, then we must conclude that the non-concurrence of the actual requirements of society for specific occupations and the desires of the young people has not decreased, as certain researchers suppose, but, on the contrary, has increased. The fact of the matter is that a significant portion of those graduating from secondary school (especially the evening school), soberly evaluating their own possibilities, in fact do choose for themselves more realistic paths for entering a self-supporting life (through tekhnikums, the system of vocational-technical education, or by setting to work directly). Here personal plans for enrolling at a VUZ are most often merely postponed to a later time. For example, about half of the pupils polled from secondary PTU's (vocational-technical schools) declared their intentions of subsequently enrolling in VUZ's or tekhnikums. Undoubtedly, young people take into consideration the fact that, when they enroll for studies, production workers are granted considerable advantages. Thus, the increase in the number of those enrolling in vocational-technical schools and courses reveals merely the fact that there is a substantial growth in the proportion of young people who desire to acquire a specialization before they start to work. This is conditioned both by the increased technical level of production and by the broadened possibilities for appropriate instruction within the system of secondary vocational-technical education on full state grants.

All this testifies to the fact that the total proportion of young people aged 17 who are oriented in the actual life plans which they have chosen towards the working occupations has not increased during the past 15 years but, on the contrary, has decreased. Consequently, the system of vocational orientation, in the form in which it has existed and continues to exist today, has proved to be quite ineffective. The key to solving this problem is afforded by combining instruction with productive labor. Thus, during the last few years 43 percent of the graduates of Kostromskaya Oblast's rural schools have entered the field of agriculture in this oblast.

Counting those who have enrolled in vocational-technical schools, secondary specialized, and higher educational institutions in 1978, 73 percent of rural-school graduates linked their subsequent destinies with agriculture. During the last two years alone the number of young people below the age of 30 in the oblast's national economy has grown by 11.8 percent, while in agriculture the corresponding figure is 45.1 percent. More than 50 percent of the rural secondary-school graduates have remained to work in the rural areas. This is 3.5 times more than in 1971 (See SOVETSKAYA PEDAGOGIKA, 1979, No 5, pp. 57-59). In the villages of Novosibirskaya Oblast during the 1960's among the secondary-school graduates only 5.3 percent expressed a desire to choose occupations connected with agriculture. But now in those schools where student production brigades have been organized and are operating well, as much as half and more are being turned to.

An analogous principle is also to be observed in the cities as well: the organization of serious practical labor by the students and their practical inclusion in the position of the working class have proven to be the deciding factor in the turning of their social orientation towards working occupations. As is well known, labor productivity in present-day enterprises is connected with the need for vocational training. Life has convincingly proved the following proposition: the better general-educational schools, precisely on the basis of combining instruction with productive labor and general education with vocational education, are successfully solving the entire complex of educational-training problems. For example, in the city of Novosibirsk's School No 10, which is well known as one of the best in the city with regard to many basic indicators, genuine production has been functioning for many years already. In a planned system and on orders from the material-technical supply administration of the Western Siberian Region, varied (28 types) of fitting and installation tools as well as universal woodworking power tools are produced here. Moreover, a great deal of other small-series output is also produced here. All labor instruction in this school is built on the foundation of productive labor--from the 4th through the 10th grades inclusive. In the learning process the schoolchildren acquire the know-how to work on many metal-working machine tools and become practically acquainted with 15 or 16 specializations. Every year this school produces an output worth 140--160,000 rubles.

Unfortunately, this experience has still not been widely disseminated. But practical experience has shown that even if a student, when he takes a job, goes to work in a specialization which is different from the one which he acquired in school, then the mastery of the new occupation will last only from one to three months, instead of the usual six to twelve months. In 1977 the Soviet Union already had 845,000 (about 30 percent of the graduates of the day general-educational schools) who were certified in the corresponding labor occupations, i. e., the general-educational school ensured the vocational training of a contingent which amounted to approximately 50 percent of the total number of graduates of the day vocational-technical educational institutions of all types. Certainly there are excesses here and there--formal and incorrect attribution of work categories to schoolchildren. However, it frequently happens that pupils fully deserve merit the raised work categories which they receive even before they graduate

from the eight-year school. In Novosibirsk's Secondary School No 10 some eighth-grade students have Category II and are winners of the municipal competition for young lathe operators, while individual graduates of this school, when they go to work at plants, successfully perform work of Categories IV--V. Now, when in accordance with the decree of the CPSU Central Committee and the USSR Council of Ministers on schools the number of hours spent on labor training in Grades 9--10 is being doubled, there are increasing possibilities for full-valued vocational training of pupils on the basis of cooperation between the school and enterprises. In this connection it seems appropriate to recall that V. I. Lenin, who argued decisively against early vocational specialization, nevertheless considered it necessary for schoolchildren, along with general-educational and polytechnical skills, should master certain "trade-type" occupations which were very necessary at that time (joiner, carpenter, fitter), but also with their unfailing orientation towards industrial labor. As the experience of progressive pedagogues has shown, polytechnical and vocational instruction are not contradictory but rather dialectically supplement each other.

V. I. Lenin was a determined foe of dogmatic, disadvantageous attitudes towards theory. He sharply criticized all kinds of "general reasonings" and the setting forth of "abstract slogans," demanding instead a constant turning to progressive practical experience so that, by relying on it, the matter could be moved forward, expanding local experience, after suitable trial by testing, to a nationwide scale. Following this directive, let's turn to the present-day practical experience of the "Yeremeevskiy" Sovkhoz and the secondary school which is located on its territory (Omskaya Oblast). Based on their many years of joint work, as approved by the CPSU Obkom, and testing of an experimental program here, they have come to a conclusion regarding the usefulness of a much earlier than ususal familiarization of the pupils with farm equipment--from Grades 5--6 on. This allows the schoolchildren to acquire certain specializations, also opening up certain other favorable conditions for solving the complex of problems under consideration (See SOVETSKAYA PEDAGOGIKA, 1979, No 5). The experience of many progressive schools and children's creative associations in Novosibirskaya Oblast allows us to speak convincingly that even children as young as 11--14 can, without any kind of excessive strain, with benefits for their health and moral development, as well as the quality of their learning, basically master not just one but even many working occupations. In Akademgorodok in the Siberian Division of the USSR Academy of Sciences schoolchildren who are studying in the young technicians' clubs have created various types of apparatus and instruments which are on a level with present-day engineering solutions, and their manufacture requires a high degree of working skills.

One of the principal objections against any substantial increase in schools of the hours devoted to vocational training and productive labor is connected with remarks on the overloading of pupils. It seems extremely reasonable to assert that learning by itself is a sufficiently great and strenuous work, excluding the possibility of any sort of additional load, and that the introduction in any substantial amount whatsoever of productive

labor into the schools will mean an overloading, which will threaten the health and over-all development of the schoolchildren. In our opinion, however, these ideas are too exaggerated. Behind the high "average" figures for the outlays of study time are hidden a great many schoolchildren who spend considerably less time on their studies than is allowed for this purpose (See "Voprosy NOT v shkole" /Problems of Scientific Organization of Labor in School/. Edited by N. I. Sotserdotov, Moscow, 1970, p 154). The excessively large expenditures of time taken by individual schoolchildren in preparing for their lessons is caused primarily by the lack of knowing how to study and by the inability to rationally organize their own homework. Therefore, no matter how paradoxical it may seem, overloading is combined with an underloading of the schoolchildren, and this brings about the exceptionally harmful custom of working at half-power and cultivates laziness of thought and a passive attitude towards study.

At the same time, progressive experience has convincingly shown that the ordinary secondary schoolchild can, without any kind of over-strain and, on the contrary, with benefits for his physical and psychological health, study more rapidly and effectively than usual. Present-day experimental data brilliantly affirms the theoretical conclusions of physiologists and psychologists that most people actively utilize only an insignificant portion of their intellectual potential. In connection with this, the closest attention is merited by the research studies of scientists and practicing specialists which show the genuine possibility of substantially increasing the effectiveness of the educational process in the schools by means of activating learning. Moreover, such an intensification , according to the testimony of physician-hygienists, has a positive effect on the health and emctional mood of pupils. Children's extreme business with their studies is an argument not "against" increasing the time to be spent on productive labor in the schools but, on the contrary, "for" such an increase. A simple adding up of the time spent in physical labor and in studying in determining the dimensions of the optimum loads of a schoolchild is metthodologically erroneous, inasmuch as these are qualitatively different types of activity. The productive labor of pupils may serve as a unique catalyst for intensifying the learning processes. Well-organized productive labor and labor instruction, as shown by the experience of the best schools, facilitate the cultivation among schoolchildren of a conscientious attitude toward their studies and a striving to acquire a secondary education. Also well known is the fact that in those secondary vocational-technical schools where a literate and organic combination of instruction and productive labor is provided, the quality of the pupils' knowledge and skills with regard to the general-educational disciplines proves to be at the level of progressive day secondary schools.

The combination of instruction with productive labor today has acquired an extremely great importance from the standpoint of providing a universal secondary education. The universality and obligatory nature of the young people's secondary education is not linked with some kind of administrative-compulsory measures aimed at youths and girls who do not want, for some reason or other, to continue their studies beyond the eighth grade.

Furthermore, many schoolchildren because of family traditions and other factors are oriented at this age at the most rapid acquisition of a simple, working specialization, self-supporting work on the production line, and, therefore, they do not want to receive a scholastic-type, secondary education. In the eyes of this portion of the young people the organization of serious productive labor and instruction in specific occupations sharply increases the prestige of scholastic education and arouses them to take a more serious attitude towards their studies. At the same time, a well-organized, production-type, physical labor, connected with serious national economic tasks, is, as experience has shown, a splendid and effective educational means for those who are often relegated to the category of "laborers." We consider that the statements against drawing all children into serious productive labor and the worker training of all children at the vocational level to be lacking in any kind of scientific foundation. Moreover, there is quite a good deal of evidence to support the concept that young people who have acquired skills in the schools, where it was mandatory for them to take a labor education, work well and remain on the job (especially agricultural work).

As is known, three basic types of secondary educational institutions have taken shape in the USSR: secondary general-educational schools, secondary vocational-technical schools, and tekhnikums. Is such a division of types obligatory, and should it be retained in the future? In our opinion, the simple bringing of all types of secondary educational institutions into the form of some averaged-out model could hardly be progressive. In order to solve this problem, we need to go beyond the limits of the closed circle of abstract-logical reasonings and unleash a broad, experimental search. It would obviously be feasible to facilitate in a maximum way the differentiation of secondary education, while taking all possible measures to stimulate integral trends. Moreover, the general-educational school must more and more basically train its own pupils for life on the basis of combining instruction with productive labor and improving vocational training. Combining productive labor with instruction represents the richest but still too weakly utilized source of internal self-development for the secondary-educational system. If all the general-educational and vocational-technical educational institutions came up to the level of the most progressive ones in organizing productive labor for the pupils, then the material-technical and financial resources of secondary education would at least be doubled, while the country's national income for this reason alone would grow by approximately 3.5--4 percent. And most importantly, by means of combining instruction with productive labor in the secondary school the skills of the aggregate worker can be sharply increased, and this will provide a difficult-to-evaluate, but even more significant, economic effect. At the same time, this will also be an essential factor in the intensification and increase of the socio-pedagogical effectiveness of the training and educational processes. Therefore, the combination of instruction and productive labor constitutes a key link in the development of universal secondary education.

Any new trends in the matter of public education, even the wisest and potentially highly effective ones, can turn out to be ineffective and discredited in practice, if the deciding factor in the training and educational process--the teacher's personality--is not prepared to carry them out in all regards. Meanwhile, serious contradictions have grown up in the processes of the functioning and formation of pedagogical staffs nowadays. Therefore, a top-priority task in the development of secondary education must be a program for the further upgrading of the socioeconomic status of the teachers, improved conditions for their work, daily lives, rest and recreation, providing for a substantial increase in their responsibility and role in the communist education of the coming generations.

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